TASK 2: EMPLOYEE DATA ANALYSIS ASSESSMENT

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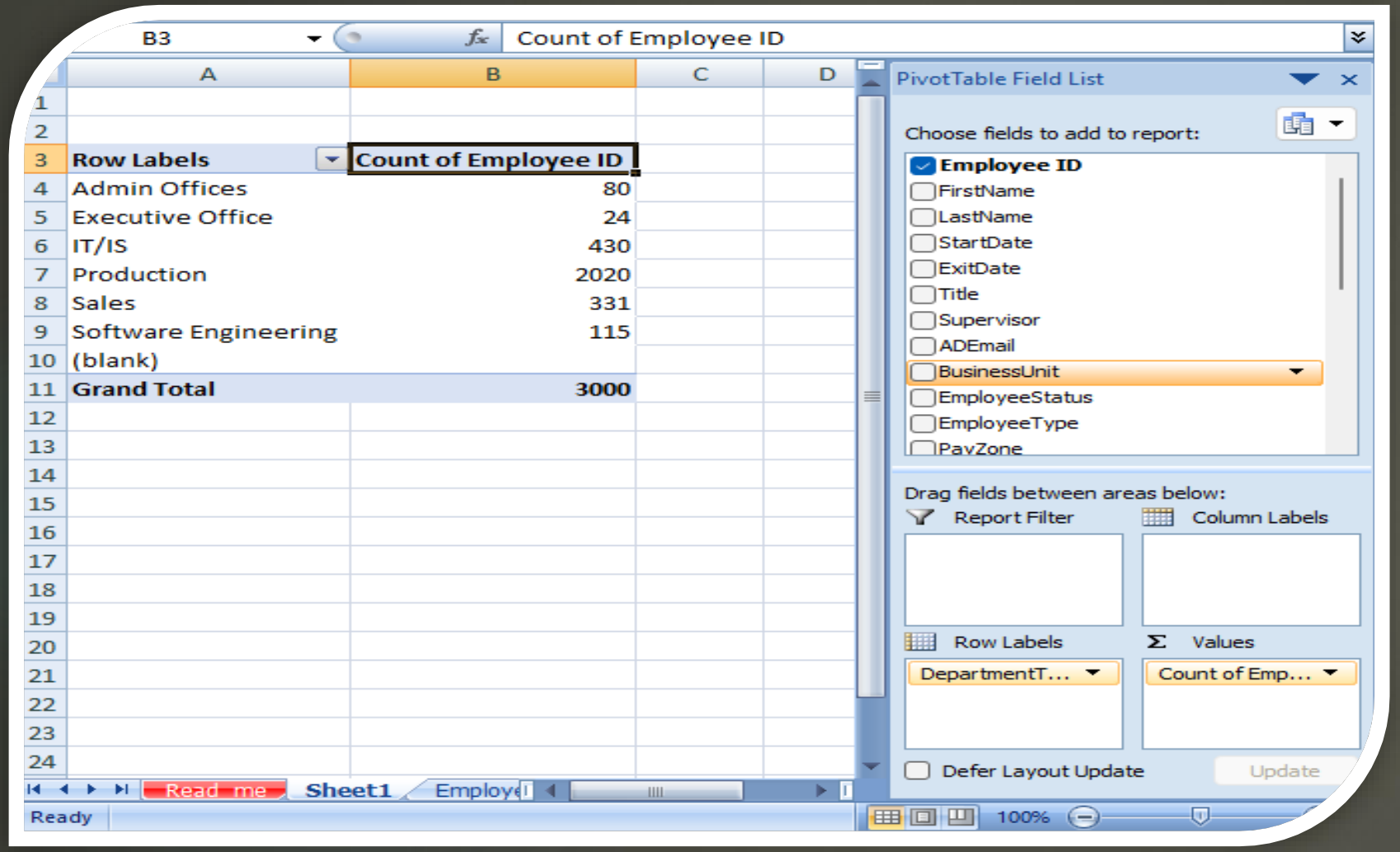
1. Can you create a pivot table to summarize the total number of employees in each department?

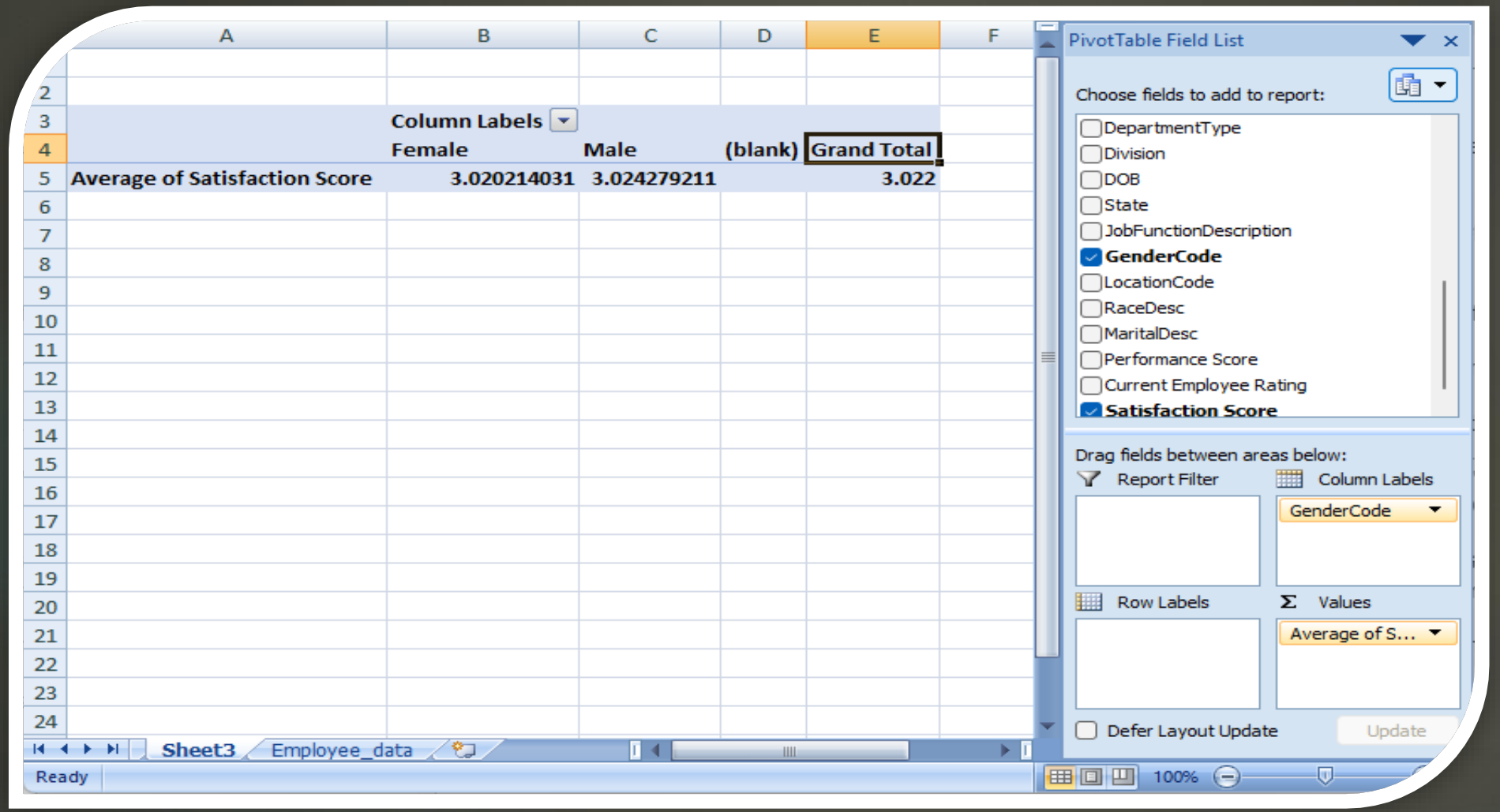


2. Apply conditional formatting to highlight employees with a "Performance Score" below 3 in red.

Go to home –-- Styles --- Conditional Formatting

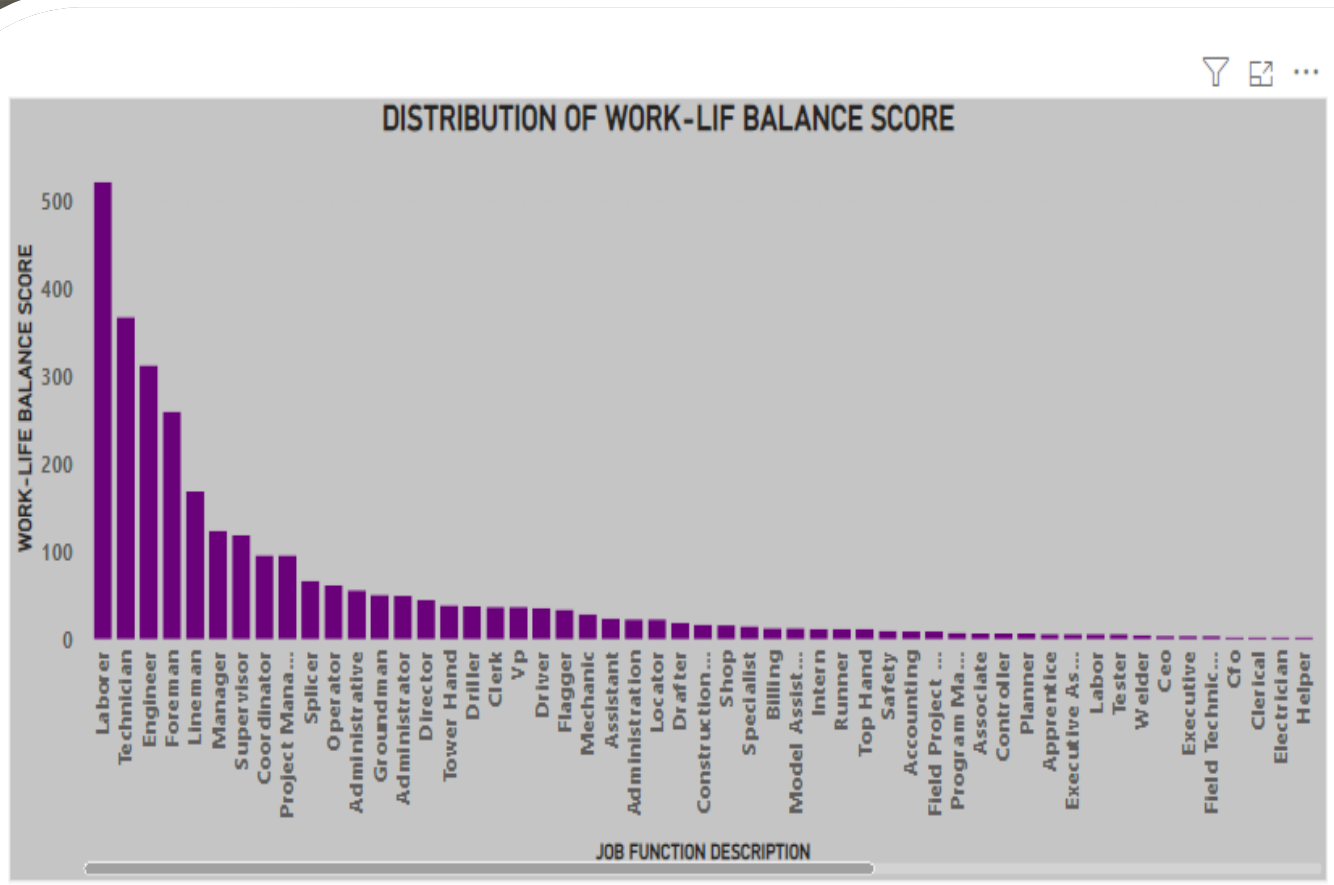
There are 2548 Employees who have performance score below 3.

3. Calculate the average "Satisfaction Score" for male and female employees separately using a pivot table.



4. Create a chart to visualize the distribution of "Work-Life Balance Score" for different job functions.

Row Labels	Sum of Work-Life Balance Score
Accountant	7
Accounting	33
Administration	67
Administrative	155
Administrator	138
Analyst	2
Apprentice	15
Assistant	63
Associate	21
Attendant	3
Billing	37
Business Development	1
Ceo	12
Cfo	10
Chief Operating Officer	4
Cio	1
Civil Hand	4
Clerical	7
Clerk	110
Construction Manager	46
Contracts	4
Controller	21
Coordinator	302

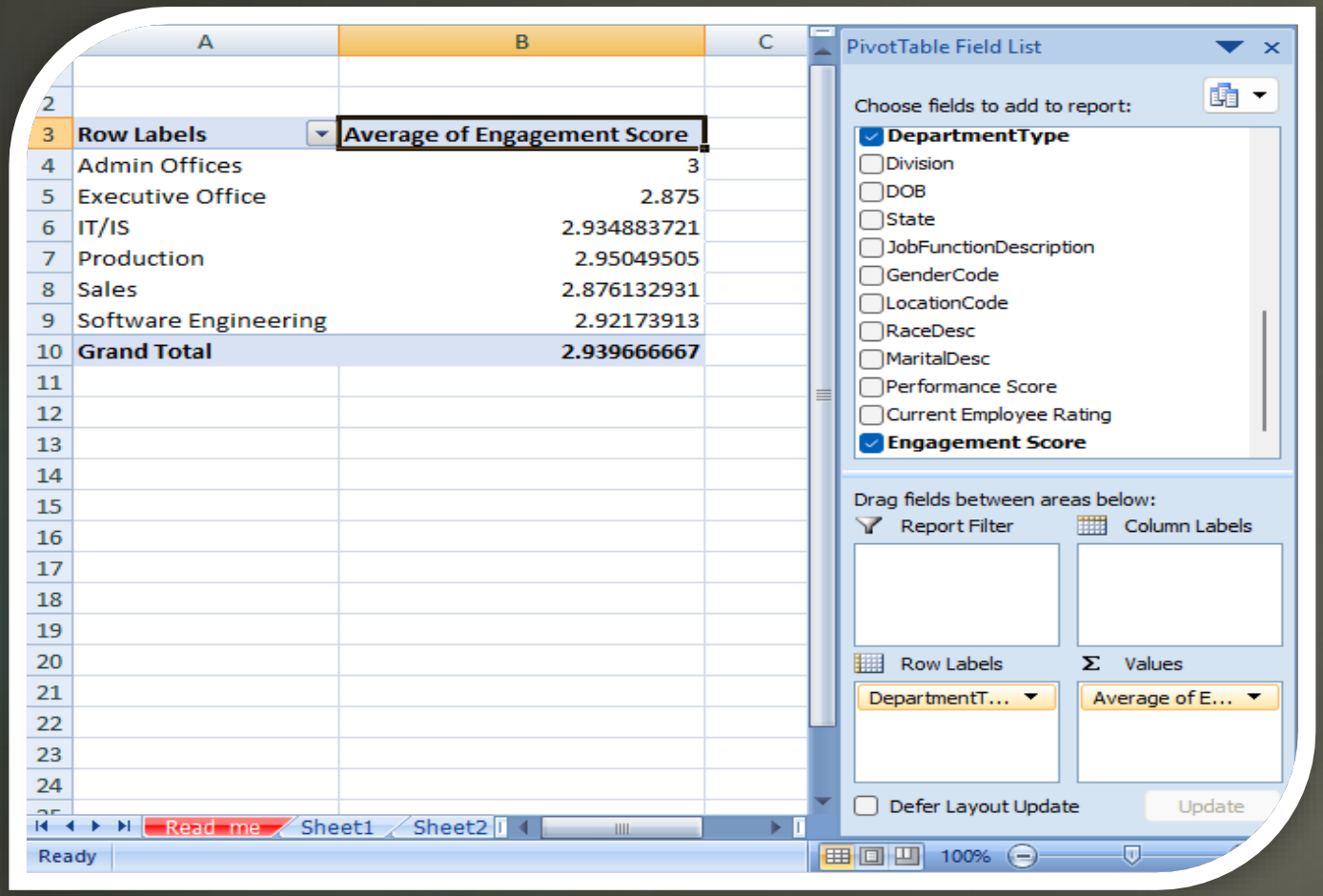


5. Filter the data to display only terminated employees and find out the most common "Termination Type."

Employee Status with termination type	Count of Employee ID
Terminated for Cause	**66**
Involuntary	21
Resignation	22
Retirement	10
Voluntary	13
Voluntarily Terminated	**321**
Involuntary	86
Resignation	74
Retirement	76
Voluntary	85
Grand Total	**387**

The most Common Termination Type is **Resignation.**

6. Calculate the average "Engagement Score" for each department using a pivot table.



Row Labels	Average of Engagement Score
Admin Offices	3
Executive Office	2.875
IT/IS	2.934883721
Production	2.95049505
Sales	2.876132931
Software Engineering	2.92173913
Grand Total	**2.939666667**

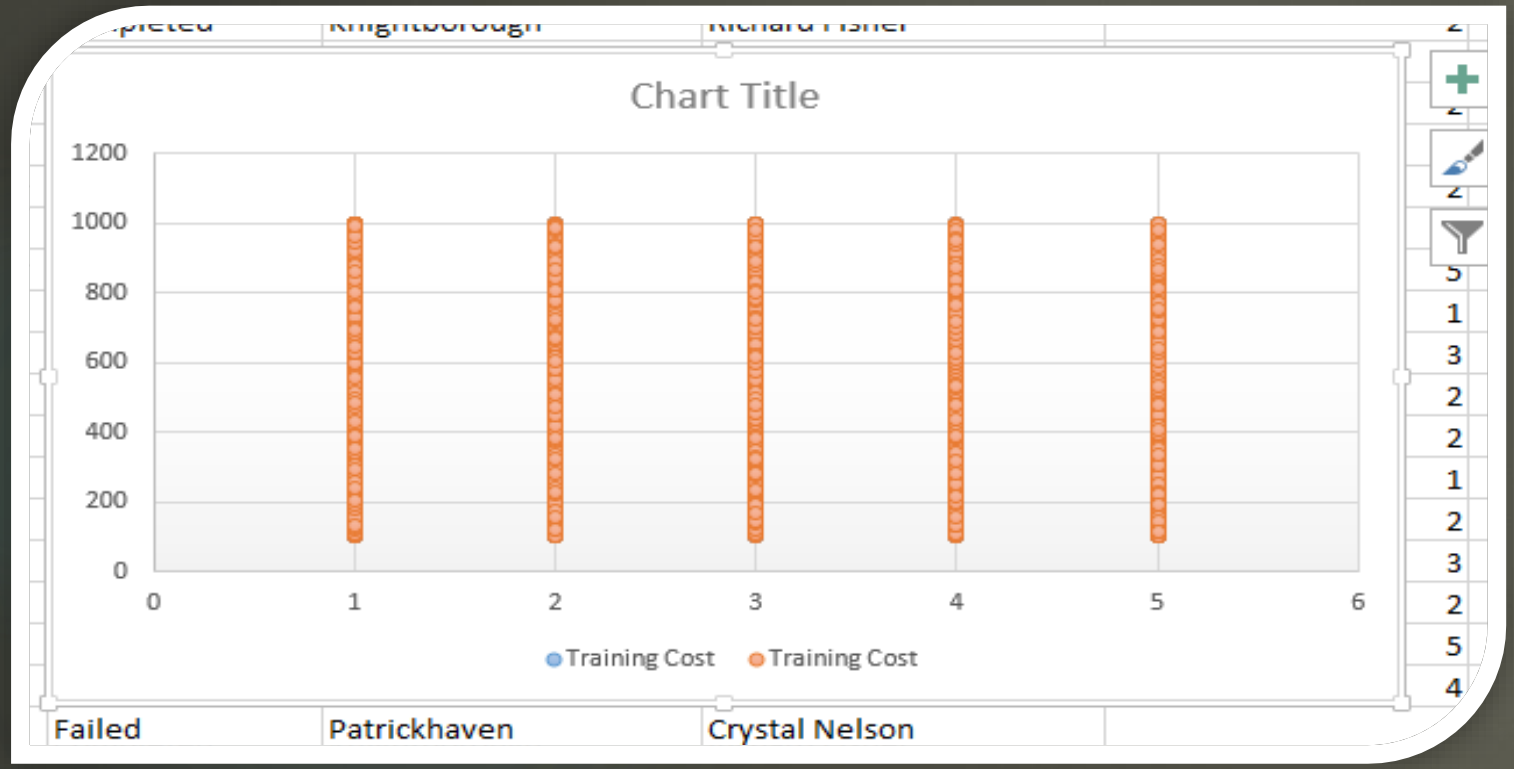
7. Use VLOOKUP to find the supervisor's email address for a specific employee.

	A	B	C
1	Employee ID	FirstName	Email ID
8	3433	Latia	latia.costa@bilearner.com
9	3434	Sharlene	sharlene.terry@bilearner.com
10	3435	Jac	jac.mckinzie@bilearner.com
11	3436	Joseph	joseph.martins@bilearner.com

8. Can you identify the department with the highest average "Employee Rating?"

Row Labels	Average of Current Employee Rating
Admin Offices	3.025
Executive Office	2.791666667
IT/IS	2.969767442
Production	2.982178218
Sales	2.909365559
Software Engineering	2.904347826
(blank)	
Grand Total	2.969

9. Create a scatter plot to explore the relationship between "Training Duration (Days)" and "Training Cost."



10. Build a pivot table that shows the count of employees by "RaceDesc" and "GenderCode."

Count of RaceDesc	Column Labels		
Row Labels	Female	Male	Grand Total
Asian	346	283	629
Black	346	272	618
Hispanic	325	247	572
Other	318	264	582
White	347	252	599
Grand Total	**1682**	**1318**	**3000**

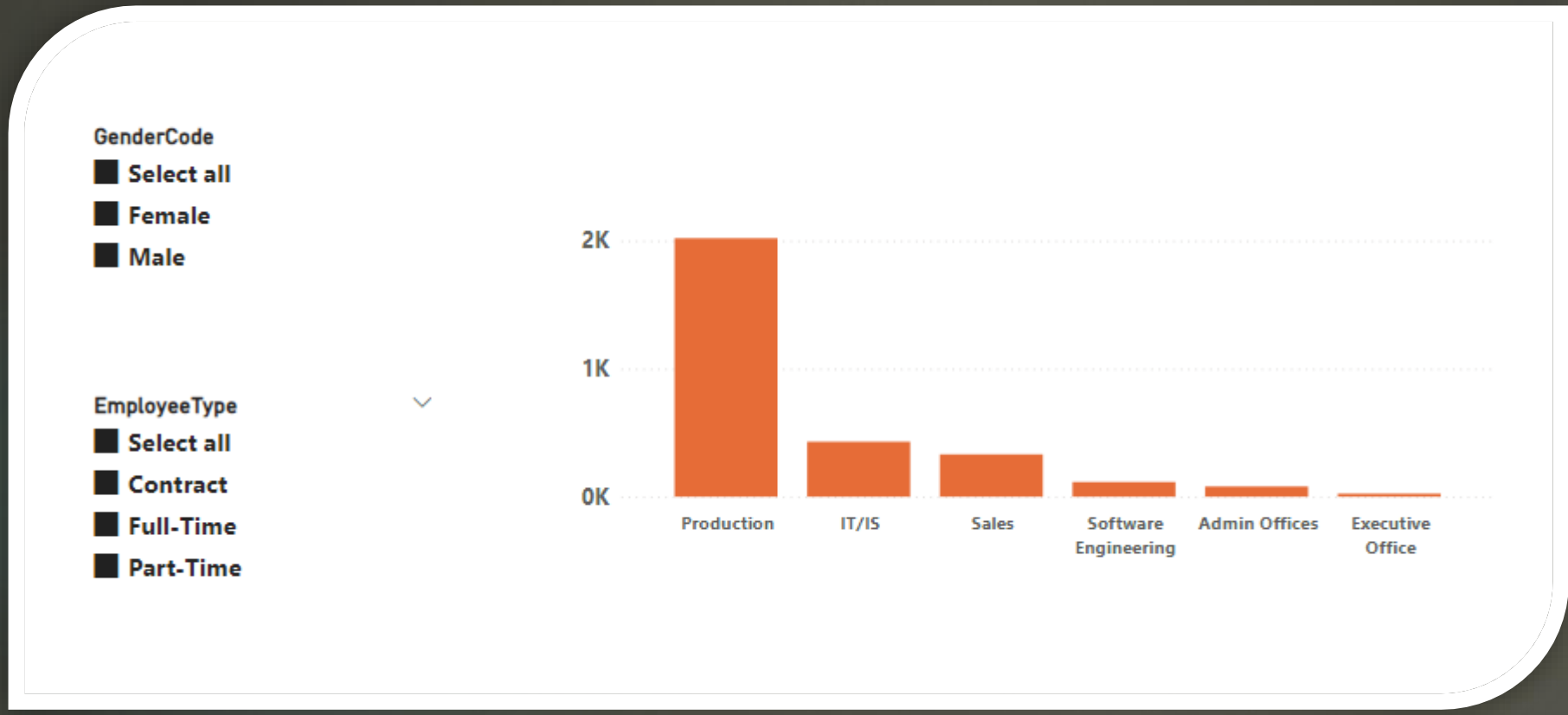
11. Use INDEX and MATCH functions to find the "Training Program Name" for an employee with a specific ID

Employee ID	Training Program Name
1001	Customer Service
1002	Leadership Development
1003	Technical Skills
1004	Customer Service
1005	Communication Skills
1006	Project Management
1007	Leadership Development
1008	Technical Skills

12. Create a multi-level pivot table to analyze the "Performance Score" by "BusinessUnit" and "JobFunctionDescription."

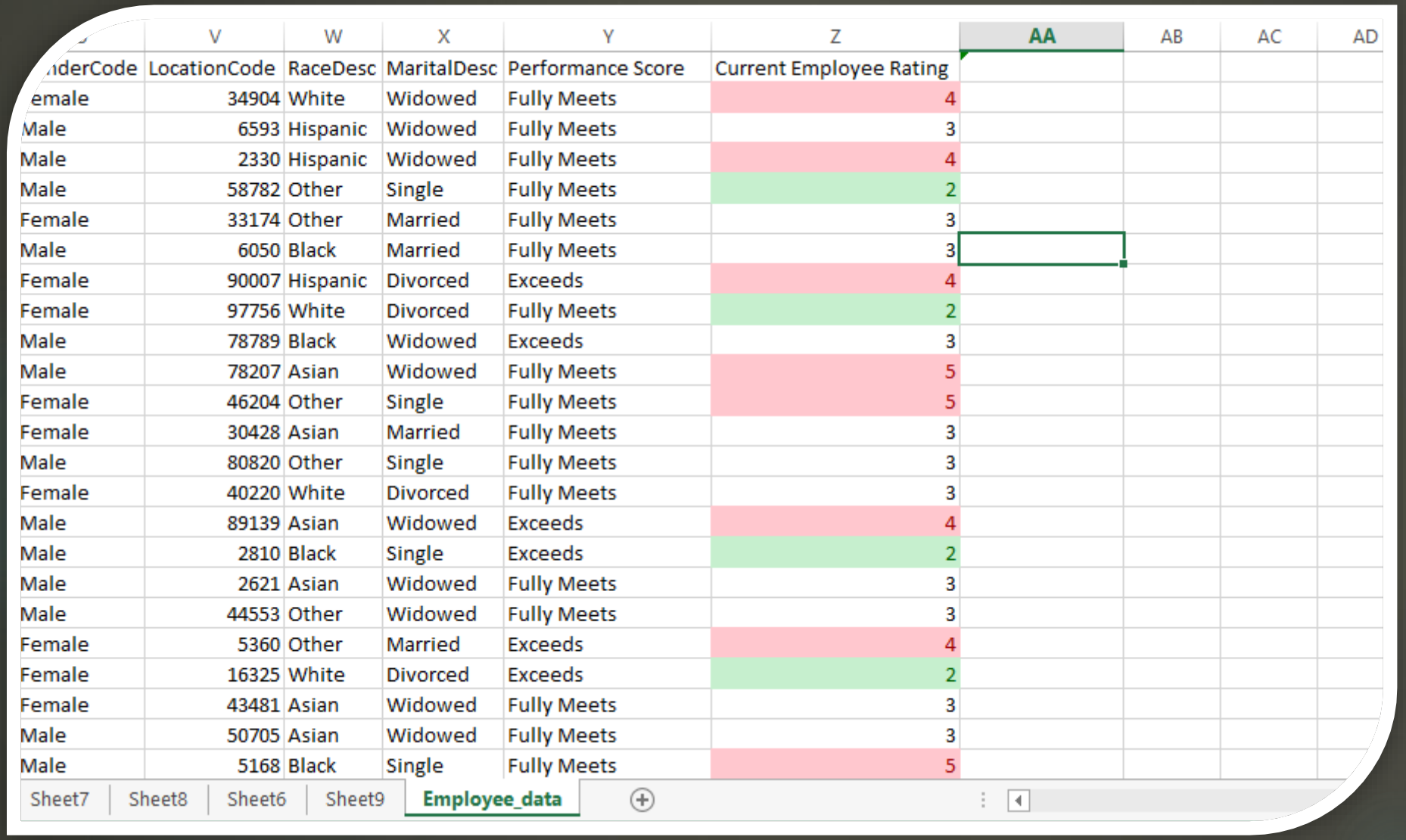
Row Labels	Count of Performance Score
BPC	303
CCDR	300
EW	302
MSC	296
NEL	304
PL	301
PYZ	299
SVG	304
TNS	297
WBL	294
Grand Total	3000

13. Design a dynamic chart that allows users to select and visualize the performance of any employee over time.



14. Calculate the total training cost for each "Training Program Name" and display it in a bar chart.

15. Apply advanced conditional formatting to highlight the top 10% and bottom 10% of employees based on "Current Employee Rating."



	V	W	X	Y	Z	AA	AB	AC	AD
nderCode	LocationCode	RaceDesc	MaritalDesc	Performance Score	Current Employee Rating				
emale	34904	White	Widowed	Fully Meets	4				
Male	6593	Hispanic	Widowed	Fully Meets	3				
Male	2330	Hispanic	Widowed	Fully Meets	4				
Male	58782	Other	Single	Fully Meets	2				
Female	33174	Other	Married	Fully Meets	3				
Male	6050	Black	Married	Fully Meets	3				
Female	90007	Hispanic	Divorced	Exceeds	4				
Female	97756	White	Divorced	Fully Meets	2				
Male	78789	Black	Widowed	Exceeds	3				
Male	78207	Asian	Widowed	Fully Meets	5				
Female	46204	Other	Single	Fully Meets	5				
Female	30428	Asian	Married	Fully Meets	3				
Male	80820	Other	Single	Fully Meets	3				
Female	40220	White	Divorced	Fully Meets	3				
Male	89139	Asian	Widowed	Exceeds	4				
Male	2810	Black	Single	Exceeds	2				
Male	2621	Asian	Widowed	Fully Meets	3				
Male	44553	Other	Widowed	Fully Meets	3				
Female	5360	Other	Married	Exceeds	4				
Female	16325	White	Divorced	Exceeds	2				
Female	43481	Asian	Widowed	Fully Meets	3				
Male	50705	Asian	Widowed	Fully Meets	3				
Male	5168	Black	Single	Fully Meets	5				

Sheet7 | Sheet8 | Sheet6 | Sheet9 | Employee_data

16. Use a calculated field in a pivot table to determine the average "Engagement Score" per year.

Row Labels	Average of Engagement score
2018	2.90
2019	3.07
2020	2.94
2021	2.89
2022	2.94
2023	2.83
Grand Total	2.94

17. Can you build a macro that automates the process of updating and refreshing all pivot tables in the workbook?


```
Sub RefreshAllPivotTables()
    Dim ws As Worksheet
    Dim pt As PivotTable

    ' Loop through all worksheets in the workbook
    For Each ws In ThisWorkbook.Worksheets
        ' Loop through all pivot tables in the worksheet
        For Each pt In ws.PivotTables
            ' Refresh each pivot table
            pt.RefreshTable
        Next pt
    Next ws
End Sub
```

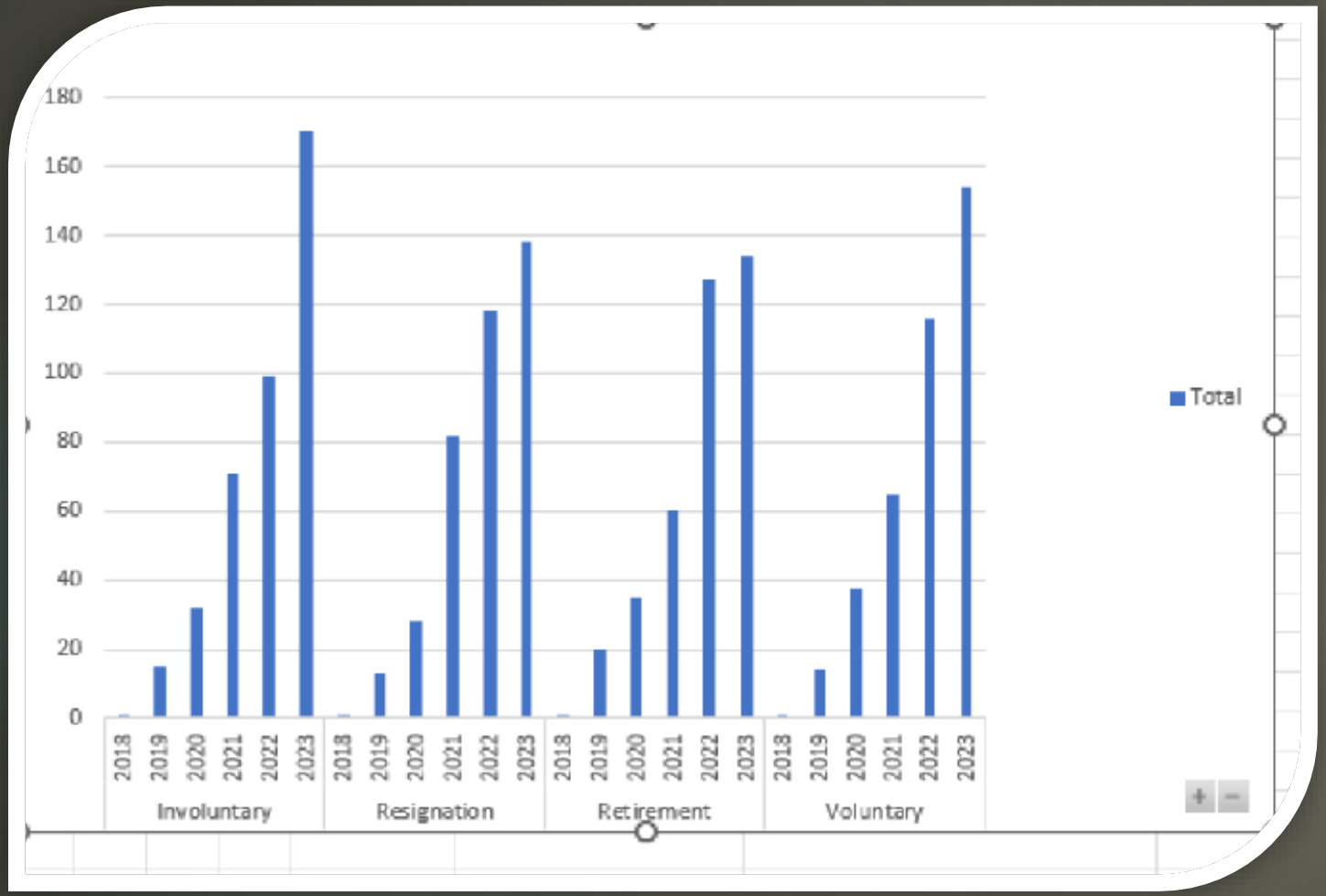
To run and add macro:

1.Press Alt + F11 to open the Visual Basic for Applications (VBA) editor.
2.In the VBA editor, right-click on "VBAProject (Your Workbook Name)" in the left pane and choose Insert -> Module to add a new module.
3.Copy and paste the provided VBA code into the module.
4.Close the VBA editor.

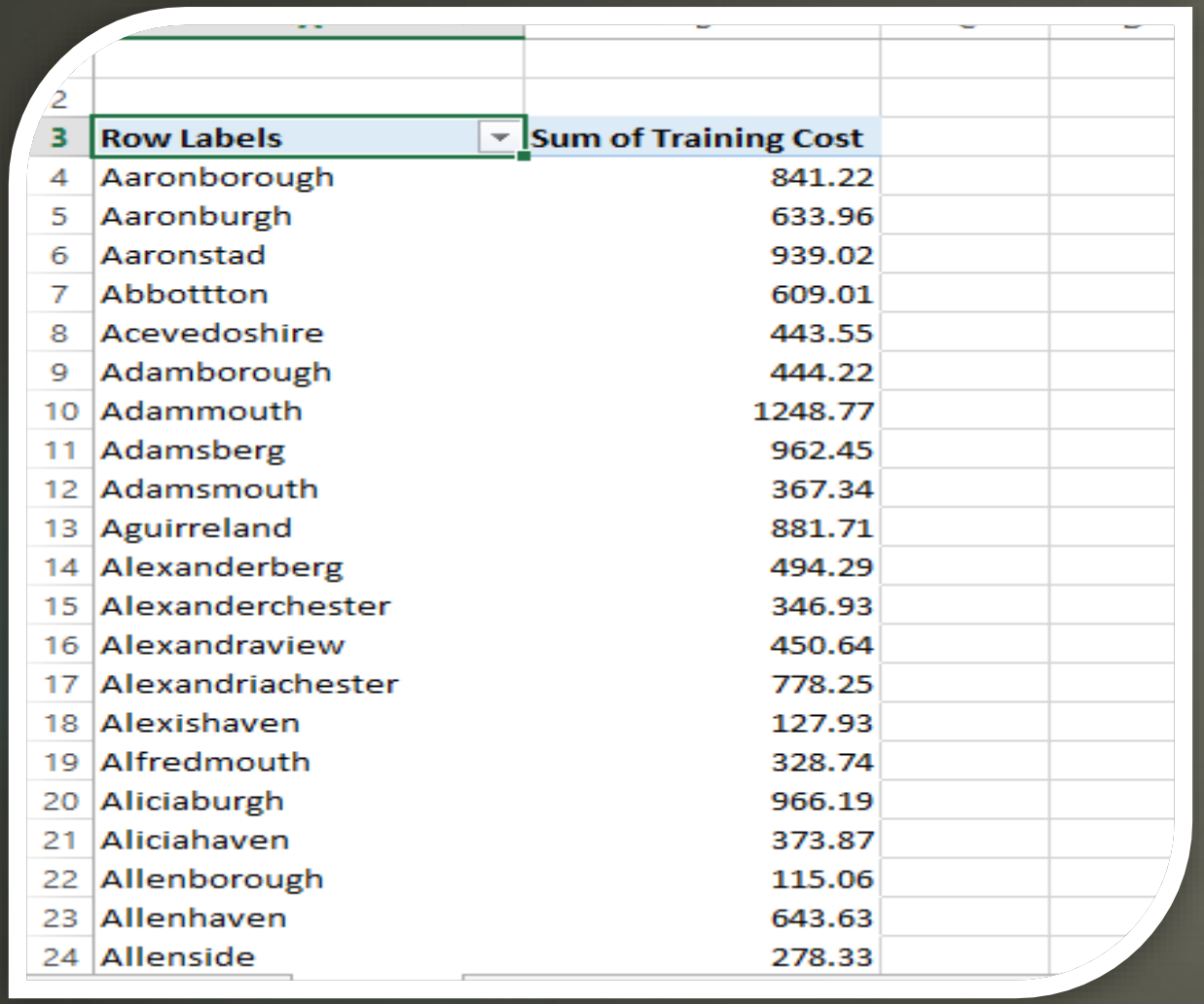
To run the macro:

1.Press Alt + F8 to open the "Macro" dialog box.
2.Select "RefreshAllPivotTables" from the list.
3.Click "Run."

18. Create a histogram to understand the distribution of "ExitDate" for terminated employees.



19. Utilize the SUMPRODUCT function to calculate the total training cost for employees in a specific location.



Row Labels	Sum of Training Cost
Aaronborough	841.22
Aaronburgh	633.96
Aaronstad	939.02
Abbottton	609.01
Acevedoshire	443.55
Adamborough	444.22
Adammouth	1248.77
Adamsberg	962.45
Adamsmouth	367.34
Aguirreland	881.71
Alexanderberg	494.29
Alexanderchester	346.93
Alexandraview	450.64
Alexandriachester	778.25
Alexishaven	127.93
Alfredmouth	328.74
Aliciaburgh	966.19
Aliciahaven	373.87
Allenborough	115.06
Allenhaven	643.63
Allenside	278.33